Mark scheme - Division

Q1. 110

[1]

Q2. 83

[1]

Q3. 70

[1]

Q4. 963r3 or 963.6 or 963 $\frac{3}{5}$

[1]

Q5. 0.36

[1]

Q6. 110

[1]

Q7. Award **TWO** marks for the correct answer of 42

If the answer is incorrect, award **ONE** mark for a formal method of division with no more than **ONE** arithmetic error,
i.e.

- long division algorithm, e.g.

```
        42 r2
17 | 714
  -  680          (40 × 17)
       36   (error)
  -    34          (2 × 17)
        2
```

OR

```
        43   (error)
17 | 714
  -  680          (40 × 17)
       34
  -    34          (2 × 17)
        0
```

- short division algorithm, e.g.

$$\begin{array}{r} 4\ 1\ \text{r7} \\ 17\overline{\smash{\big)}\ 71^24} \end{array}$$ *(error in carrying digit)*

Working must be carried through to reach a final answer for the award of ONE mark.

Short division methods must be supported by evidence of appropriate carrying figures to indicate the use of a division algorithm, and be a complete method. The carrying figure must be less than the divisor.

Up to 2m

[2]

Q8. $\frac{2}{9}$

*Accept equivalent fractions or an **exact** decimal equivalent, e.g. 0.2 (accept any unambiguous indication of the recurring digits).*

***Do not** accept rounded or truncated decimals.*

[1]

Q9. 24

[1]

Q10. For 2 marks: 131

For 1 mark:

Evidence of either a long division method or short division method with only one error (carry figures must be seen in a short division method)

Up to 2

[2]

Q11. Award **TWO** marks for the correct answer of 25

If the answer is incorrect, award **ONE** mark for the formal methods of division with no more than **ONE** arithmetical error, i.e.

$$\begin{array}{r} 25r2 \\ 29\overline{)725} \end{array}$$

$$-\ \frac{580}{145} \qquad (20 \times 29)$$

$$-\ \frac{116}{31}\ \textit{(error)}\ (4 \times 29)$$

$$-\ \frac{29}{2} \qquad (1 \times 29)$$

OR

$$29\ \frac{24}{\overline{)725}}\ \textit{(error)}$$

$$-\ \frac{58}{145} \qquad (2 \times 29)$$

$$-\ \frac{145}{0} \qquad (5 \times 29)$$

· short division algorithm, e.g.

> *Working must be carried through to reach a final answer for the award of ONE mark.*

$$\begin{array}{r} 2\ \ 6 \\ 29\overline{)72^{14}5} \end{array}\ \textit{(error)}$$

> *Short division methods must be supported by evidence of appropriate carrying figures to indicate the use of a division algorithm, and be a complete method. The carrying figure must be less than the divisor.*

Up to 2m

[2]

Q12. $\dfrac{1}{12}$

[1]

Q13. $\dfrac{5}{12}$

[1]

Q14. Award **TWO** marks for the correct answer of 15

If the answer is incorrect, award **ONE** mark for a formal method of division with no more than **ONE** arithmetic error, i.e.

• long division algorithm, e.g.

$$\begin{array}{r} 14 \quad \textit{(error)} \\ 43\overline{)645} \\ -430 \\ \hline 215 \\ -215 \\ \hline 0 \end{array}$$

OR

$$\begin{array}{r} 15 \text{ r}28 \\ 43\overline{)645} \\ -430 \qquad 10 \times 43 \\ \hline 215 \\ -129 \qquad 3 \times 43 \\ \hline 114 \quad \textit{(error)} \\ -86 \qquad 2 \times 43 \\ \hline 28 \end{array}$$

> *Working must be carried through to reach a final answer for the award of **ONE** mark.*

• short division algorithm, e.g.

$$\begin{array}{r} 15 \text{ r}3 \quad \textit{(error)} \\ 43\overline{)64^{21}5} \end{array}$$

> *Short division methods **must** be supported by evidence of appropriate carrying figures to indicate the use of a division algorithm, and be a complete method. The carrying figure **must** be less than the divisor.*

Up to 2m

[2]

Q15. Award **TWO** marks for the correct answer of 38

If the answer is incorrect, award **ONE** mark for a formal method of division with no more than **ONE** arithmetic error, i.e.

• long division algorithm, e.g.

$$\begin{array}{r} 38 \text{ r}2 \\ 59\overline{)2242} \\ -1770 \qquad (30 \times 59) \\ \hline 474 \quad \textit{(error)} \\ -472 \qquad (8 \times 59) \\ \hline 2 \end{array}$$

OR

```
        35    (error)
59 | 2242
  −  1770          (30 × 59)
      472
  −    472          (8 × 59)
        0
```

- short division algorithm, e.g.

```
      3  7 r48   (error)
59 | 224⁴⁷2
```

*Working must be carried through to reach a final answer for the award of **ONE** mark.*

Short division methods must be supported by evidence of appropriate carrying figures to indicate the use of a division algorithm, and be a complete method. The carrying figure must be less than the divisor.

Up to 2m

[2]